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09/599,005	06/22/2000	Masahiro Kaminaga	520.38691X00	8576

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EXAMINER

ZAND, KAMBIZ

ART UNIT	PAPER NUMBER
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2132

DATE MAILED: 07/08/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/599,005

Applicant(s)

KAMINAGA ET AL.

Examiner

Kambiz Zand

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE ____ MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 June 2000.
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 7-11 and 21-22 is/are pending in the application.
4a) Of the above claim(s) ____ is/are withdrawn from consideration.
5) ☐ Claim(s) ____ is/are allowed.
6) ☒ Claim(s) 7-11 and 21-22 is/are rejected.
7) ☐ Claim(s) ____ is/are objected to.
8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☒ The drawing(s) filed on 22 June 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 2.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: ____.

DETAILED ACTION

1. The text of those sections of Title 35, U.S. Code not included in this section can be found in the prior office action.
2. The prior office actions are incorporated herein by reference. In particular, the observations with respect to claim language, and response to previously presented arguments.
3. Applicant provisionally elects, **without traverse**, the invention of Group II, claims **7-11, 21 and 22**. Examiner request a clarification with respect to claims 1-6, 12-20 and 23-25 status (cancelled or withdrawn) since response to restriction requirement (paper number 6) is not specific.
4. Claims 1-6, 12-20 and 23-25 are withdrawn from examination.
5. Foreign Priority benefit claimed under Title 35, United States Code, § 119 have been acknowledged.
6. Claims 7-11 and 21-22 are pending.

Inventorship

7. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship

must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

8. The date of the signature of Inventor number 9, Mr. Satoshi Taira is missing (see page 5 of the declaration). The signature also appears as only representation of spelling of inventor's name rather than a signature. Examiner appreciates a confirmation or clarification with respect to the Inventor signature and signature's date.

Drawings

9. **Figures 1-4** should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g).

10. Minor informalities:

Fig.3: Examiner suggests items "51-55" to be written out within the figure in harmony with page 61 of the specification. For example: See items 8001, 8002 and 8003 of fig.1 which has been defined within the figure in a clear manner and in harmony with the specification.

Specification

11. The specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification. Appropriate correction/clarification is requested.

12. Applicant is reminded of the duty to fully disclose information under 37 CFR 1.56.

Information Disclosure Statement PTO-1449

13. The Information Disclosure Statement submitted by applicant on 06/22/2000 (paper number 2) has been considered. Please see attached PTO-1449.

Claim Rejections - 35 USC § 112

14. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

15. **Claims 7, 8, 10, 11 and 21-22** are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In **claim 7, 8, 10, 11, 21 and 22**, the phrase "can be.." (page 163, lines 15, 16, 25; page 164, line 1 and 23; page 165, line 7; page 170, line 9, 11, 18) makes the claims indefinite

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and unclear in that neither means nor interrelationship of means are set forth in these claims in order to achieve the desired results expressed in the phrase "can be...".

In claim 21, the phrase "encryption can be carried out between said information processing device and said signal line; and decryption can be carried out

between said signal line and said information memory device" is confusing and

unclear. Signal line is only a communication link between devices and therefore it is not clear how encryption or decryption process is being processed between a device and a communication link for that device. Examiner considers the above phrase as an encryption process being conducted by an information processing unit where encrypted information is being transmitted by a signal line to another information processing unit that decrypt the information and decrypted information is being transmitted by a signal line to a memory where the signal line or communication link are set up between encryptor/decryptor and memory for purpose of examination.

In claim 22, the phrase "storing a plurality of pieces of information at the same plurality of storage locations" is confusing and unclear. It is not clear if for example

information pieces a and b are stored in storage location X and information pieces c and d are stored in storage location y (different data in different locations) **or** information pieces a and b are stored in different storage locations X, Y and Z (same data in different locations) **or** a and b are stored within different locations of an storage location X.

Correction or clarification is requested.

Claim Rejections - 35 USC § 102

16. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

17. **Claims 7-11 and 21** are rejected under 35 U.S.C. 102(b) as being anticipated by Morris et al (4,503,287).

Examiner has considered the claim language as broad as possible. However based on the content of the specification, it is examiner opinion that the invention concept is not reflected on the claims language and the content of the claim only represent prior art.

As per claim 7 Morris et al (4,503,287) teach an information processing device having at least a signal line connected to said information processing device (see fig.2 where signal line from item between items 26, 27 ,30 and 31 is connected between the terminal and the host computer of 16 and 12 or see the relationship between items 42 and 43 and their communication link; col.3, lines 28-47 where the link or signal line between encryptor/decryptors are disclosed. Examiner considers

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terminal device, host computer, encryptor/decryptor device as an information processing unit) wherein, between said information processing device and said signal line, a signal from said information processing device can be encrypted (**see col.4, lines 29-38 where the encrypted or cipher text is transmitted across the telecommunication link**) and an encrypted signal transmitted from said signal line can be decrypted (**see col.4, lines 39-43 where the received cipher is deciphered**).

As per claim 8 Morris et al (4,503,287) teach a data processing apparatus comprising at least a first information processing device and a second information processing device connected to said first information processing device by a signal line (**see fig.2 where the apparatus consist of information device 22 and 24 connected to each other by communication link 26 and 27**) wherein, between at least either said first information processing device or said second information processing device and said signal line, a signal from said first information processing device or said second information processing device can be encrypted and a signal transmitted from said signal line can be decrypted (**see fig.2 where both information device 22 and 24 have the capabilities and means of items 42 and 43 to encipher or decipher a signal or encipher or decipher received or transmitted signal or text between information processing units 22 and 24 or vice versa**; Examiner also considers encryptor of fig.4 and decryptor of fig.5 as information processing device that are capable of enciphering and deciphering where decipher information processing device uses an inverse function of fig.4 to decipher the cipher text or signal as

disclosed in col.5, lines 34-55, the encryptor and decryptor of fig.4 and 5 corresponds to items 42 and 43 of fig.2).

As per claim 9 Morris et al (4,503,287) teach a data processing apparatus comprising at least a first information processing device and a second information processing device connected to said first information processing device by a signal line (**see fig.2 where the apparatus consist of information device 22 and 24 connected to each other by communication link 26 and 27**) wherein: a signal from said first information processing device is encrypted and said encrypted signal from said first information processing device is decrypted before being supplied to said second information processing device (**see fig.4 and 5 where encryptor means and decryptor means of 42 or 43 are detailed in clear language. That is each of the unit 42 or 43 has the capability to encipher a signal and decipher it by using the inverse function of the enciphering method and transmit it to one another, from 42 to 43 or vice versa or from item 22 to 24 or vice versa through communication links 26 and 27 or 30 and 31**) ; and a signal from said second information processing device is encrypted and said encrypted signal from said second information processing device is decrypted before being supplied to said first information processing device (**see fig.4 and 5 where encryptor means and decryptor means of 42 or 43 are detailed in clear language. That is each of the unit 42 or 43 has the capability to encipher a signal and decipher it by using the inverse function of the enciphering method and transmit**

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it to one another, from 42 to 43 or vice versa or from item 22 to 24 or vice versa through communication links 26 and 27 or 30 and 31).

As per claim 10 Morris et al (4,503,287) teach a data processing apparatus comprising at least an information processing device (see fig.2 where the apparatus consist of information device 22 and 24 connected to each other by communication link 26 and 27), an information memory device (see fig.2, items 34 or 35 or 38 or 39 or 40 or 41 where any of the storage device are considered as memory device that store information) and a signal line connected at least to said information processing device (see signal lines 26, 27, 30 and 31 of fig.2) wherein: at least in an operation to store information into said information memory device, said information is encrypted; and information stored in said information memory device can be decrypted (see col.5, lines 6-31 where by an operation for storing information in memory device through a process cycle is detailed; fig.4-5 and col.5, lines 34-55 disclose enciphering of the stored information and deciphering of the information by using the inverse function of the encipher function).

As per claim 11 Morris et al (4,503,287) teach a data processing apparatus comprising at least an information processing device (see fig.2 where the apparatus consist of information device 22 and 24 connected to each other by communication link 26 and 27), an information memory device (see fig.2, items 34 or 35 or 38 or 39 or 40 or 41 where each of the storage device are considered as memory device that store

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information) and a signal line connected at least to said information processing device (see signal lines 26, 27, 30 and 31 of fig.2) wherein: at least in an operation to store information into said information memory device (see col.5, lines 6-31 where by an operation for storing information in memory device through a process cycle is detailed), said information is encrypted; and information stored in said information memory device can be decrypted before supplying said information through said signal line to said information processing device (fig.4-5 and col.5, lines 34-55 disclose enciphering of the stored information and deciphering of the information by using the inverse function of the encipher function; also see fig.2 where the encrypted information can be decrypted by item 42 or 43 and where encipher c^t may be decrypted p^t and transmitted as plain text or information to another information processing unit (in this case item 22 or 24) through communication links or signal links 26,27, 30 and 31).

As per claim 21 Morris et al (4,503,287) teach a data processing apparatus comprising at least an information processing device (see fig.2 where the apparatus consist of information device 22 and 24 connected to each other by communication link 26 and 27), an information memory device (see fig.2, items 34 or 35 or 38 or 39 or 40 or 41 where each of the storage device are considered as memory device that store information) and a signal line connecting said information processing device to said information memory device (see connections between the memory devices or storage devices and information processing units such as 42 and 43 in fig.2

where each communication link is a signal line that transmit signal between the storage devices and the mentioned information processing units; col.3 and 4 disclose in detail the communication links (signal lines) between information processing devices, 22,24, 42, 43 and storage means (memory) where encryption/decryption session keys or master key are stored) wherein: encryption can be carried out between said information processing device and said signal line; and decryption can be carried out between said signal line and said information memory device (see fig.2 where signal line from item between items 26, 27 ,30 and 31 is connected between the terminal and the host computer of 16 and 12; col.3, lines 28-47 where the link or signal line between encryptor/decryptors are disclosed. Examiner considers terminal device, host computer, encryptor/decryptor device as an information processing unit; and col.3, lines 48-67 and col.4, lines 1-5 where the communication links between information processing devices such as items 22, 24, 42 and 43 and memory (storage medium) are detailed. Fig.2 in general disclose a plain text 28 or information are transmitted from item 16 by communication link 26 to another information processing unit 42 where the encrypted information is transmitted by communication link 30 to information processing unit 43 of host 12 to be decrypted where the decrypted information may be transmitted to by a signal line to a memory or storage medium 41 where the information encrypted and decrypted is a session key used for encryption and decryption of the information; and vice versa. Therefore fig.2 disclose the limitation of claim 21 in detail).

Claim Rejections - 35 USC § 103

18. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

19. **Claim 22** is rejected under 35 U.S.C. 103(a) as being unpatentable over Morris et al (4,503,287) in view of Shelton et al (6,035,380 A).

As per claim 22 Morris et al (4,503,287) teach an information memory device for storing a plurality of pieces of information at the same plurality of storage locations (see fig.2, items 34 or 35 or 38 or 39 or 40 or 41 where each of the storage device are considered as memory device that store information that corresponds to plurality of storage locations and where plurality of information are stored such as session key, master key (see col.3, lines 48-50 and 61-62); information can be written into and read out from each storage locations; information to be recorded into any of said storage locations is encrypted; and information read out from any of said storage locations is decrypted(see fig.2 where signal line from item between items 26, 27 ,30 and 31 is connected between the terminal and the host computer of 16 and 12; col.3, lines 28-47 where the link or signal line between

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encryptor/decryptors are disclosed. Examiner considers terminal device, host computer, encryptor/decryptor device as an information processing unit; and col.3, lines 48-67 and col.4, lines 1-5 where the communication links between information processing devices such as items 22, 24, 42 and 43 and memory (storage medium) are detailed. Fig.2 in general disclose a plain text 28 or information are transmitted from item 16 by communication link 26 to another information processing unit 42 where the encrypted information is transmitted by communication link 30 to information processing unit 43 of host 12 to be decrypted where the decrypted information may be transmitted to by a signal line to a memory or storage medium 41 where the information encrypted and decrypted is a session key used for encryption and decryption of the information; and vice versa. Morris's system has the inherent capabilities of such limitations since they do include an encryptor/decryptor unit in both information processing units 22 and 24 (see fig.2, items 42 and 43) where col.4, lines 30-38 disclose encrypted data is written to storage 40 and lines 39-43 disclose decrypted data (session key) is read from storage 41 for processing a decryption action) but do not explicitly disclose an information memory device is divided by address into said plurality of said storage locations; and any data is written to any storage is encrypted and any data read from any storage is decrypted data. **However Shelton et al (6,035,380 A) disclose** an information memory device is divided by address into said plurality of said storage locations (see col.3, lines 12-19 where the storage means are divided to at least two region (plurality of storage locations) and lines 30-34

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disclose each storage region is enabled by a paged addressing means to supply addresses to a storage region or location where the instructions are stored; see also fig.7a, items 702-704, 715-720 with respect to the above limitations).

It would have been obvious to one of ordinary skilled in the art at the time the invention was made to utilize Shelton's memory device division by addresses in Morris's two tired communication system that includes encryptor/decryptor processing units in order to have a multi-plexing means arranged to select destination processing means for instructions in order for example to receive and decode instructions from first storage location at a first instruction rate.

Conclusion

20. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

U.S. Patent No. US (5,461,674 A) teach method and apparatus for controlling playback of recorded HDTV signals.

U.S. Patent No. US (5,029,207) teach external security module for a television signal decoder.

U.S. Patent No. US (5,999,623 A) teach broadcast data access controller communication system.

U.S. Patent No. US (6,295,604 B1) teach cryptographic packet processing.

U.S. Patent No. US (6,332,025 B2) teach software distribution system and software utilization scheme for improving security and user convenience.

U.S. Patent No. US (5,144,664 A) teach apparatus and method for upgrading terminals to maintain a secure communication network.

U.S. Patent No. US (6,317,832 B1) teach secure multiple application card system and process.

U.S. Patent No. US (6,073,252 A) teach data processing system with memory patching and method thereof.

U.S. Patent No. US (5,210,854 A) teach system for updating program stored in EPROM.

U.S. Patent No. US (5,995,623 A) teach information processing apparatus with a software protecting function.

21. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kambiz Zand whose telephone number is (703) 306-4169. The examiner can normally be reached on Monday-Thursday (8:00-5:00). If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gilberto Barron can be reached on (703) 305-1830. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9306. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR

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or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Kambiz Zand

07/06/04